

# ABSTRACT

A semiconductor device includes a first conductive type semiconductor layer 30, a first unit cell 10 having a first conductive type first semiconductor region 12 formed in the semiconductor layer 30 and a contact region 14, a second unit cell 20 having a second conductive type second semiconductor region 22 formed in the semiconductor region 30 and a contact region 24. The first unit cell 10 and the second unit cell 20 act as a diode element 100 in cooperation.